Star Dies in Giant Gamma Ray Burst

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WASHINGTON (Reuters) - Astronomers who flipped their telescopes to see a gamma ray burst "live" said on Wednesday they witnessed the death of a gigantic star and the birth of what looks like a black hole.

They said NASA's High-Energy Transient Explorer satellite, ground-based robotic telescopes and fast-thinking researchers around the globe managed to catch the fleeting flash of energy.

"If a gamma ray burst is the birth cry of a black hole, then the HETE satellite has just allowed us into the delivery room," Derek Fox of the California Institute of Technology in Pasadena said in a statement.

"This stunning observation places us in the fiery throes of a star explosion, peering through the debris at a newly formed black hole within," said Anne Kinney, NASA's director for astronomy and physics.

Writing in the journal Nature, Fox and colleagues said their observations help support the theory that gamma-ray bursts come from stars as they collapse to become black holes. A black hole is a pinpoint of matter that is so dense -- because it contains the mass of a star -- that nothing can escape it.

These spinning objects suck in surrounding matter with their tremendous gravitational forces.

Gamma ray bursts are common, yet random and fleeting. The gamma ray portion of a burst typically lasts from a few milliseconds to 100 seconds. But the afterglow of weak light or X-rays can linger for days or weeks.

Fox's team describes a gamma ray burst named GRB021004 that appeared in October. The Automated Response Telescope in Wako, Japan, was able to turn and start recording the burst within four minutes.

Scientists raced to focus more than 50 telescopes in California, across the Pacific, Australia, Asia and Europe to catch the dying rays before the black hole prevented even light from escaping.
